



ARTICLES

A Revolution in Academic Publication

By Charles F. Webber, University of Calgary

Abstract

This paper discusses some of the issues related to e-journals: cost, speed of publication, global access, the politics of academic publication, and reduced control of publication houses. E-journals are also examined relative to their impact on academic responsibility, the peer review process, censorship, credibility, and academic literacy skill development. Commonly-cited drawbacks of e-journals are critiqued, e.g., archiving, range of quality, institutional acceptance, cost of technology, and plagiarism. The paper proposes a framework for assessing both e-journals and traditional print journals.

Introduction

The recent proliferation of electronic academic journals (e-journals) has led librarians and researchers to question many of the traditional values of the academy. Where should research reports be published? Who decides what is publishable? Should knowledge created at public expense be resold in the form of expensive journal subscriptions to the very institutions that produced the information? How should readiness for tenure and promotion be assessed? These and many other questions provide motivation for conferences such as *New Ways and New Technologies in Social Sciences, Humanities and the Arts*.

This paper will discuss some of the factors influencing e-journals, such as cost, speed of publication, global access, the politics of academic publication, and reduced control of publication houses. As well, it will look at e-journals in relation to their impact on academic responsibility, the peer review process, censorship, credibility, and academic literacy skill development. Commonly-cited drawbacks of e-journals will be critiqued, e.g., archiving, range of quality, institutional acceptance, cost of technology, and plagiarism. The paper will close with a proposed framework for assessing both e-journals and traditional print journals.

Development and Proliferation of E-Journals

The e-journals included in the *Communication of Research* Special Interest Group (SIG) of the American Educational Research Association (AERA) (2004) provide ample evidence of the rapid expansion of online publication venues. To be included in the list e-journals must be: (1) scholarly, (2) peer-reviewed, (3) full text, and (4) accessible without cost. An online link search using several search engines produced the following results.

Table 1. Number of online links to a sample of e-journals, October 13, 2004.

E-journal	Number of links to e-journal website			
	Altavista	Google	Hotbot	Yahoo
Educational Policy Analysis Archives http://epaa.asu.edu/	849	221	403	1250
Educational Researcher http://www.aera.net/pubs/er/	535	130	256	899
Advancing Women in Leadership Online Journal http://www.advancingwomen.com/awl/awl.html	383	111	178	600
International Electronic Journal for Leadership in Learning http://www.ucalgary.ca/~iejll/	346	74	153	465
Turkish Online Journal of Distance Education http://tojde.anadolu.edu.tr/	240	73	137	334
Canadian Journal of Educational Administration and Policy http://www.umanitoba.ca/publications/cjeap/	213	67	140	313
Revista Electronica de Investigacion Educativa http://redie.ens.uabc.mx/	133	26	91	188
Journal of Cases in Educational Leadership http://www.ucea.org/cases/	97	12	59	132
Australian Educational Researcher http://www.aare.edu.au/aer/aer.htm	75	22	44	129
Journal of Research for Educational Leaders http://www.uiowa.edu/~jrel/	54	15	21	97

Clearly, e-journals are freely accessible, globally accessible and, potentially, of high impact given the sorts of organizations that link to them, e.g. government departments, university libraries, professional organizations, and school districts. In some ways, the wide accessibility of e-journals could be said to represent the democratization of information access that previously was restricted because of subscription costs for print journals or because of what has been called the monopoly of scholarly publication (Meyer, 2001; Quandt, 2003). Indeed, e-journals have increased access to information normally created at the expense of public institutions but then repackaged as print journals that are edited for little or no cost by academics, and paid for again by some of those same public institutions (see Bergstrom & Preston McAfee, 2005; Morris, 2003). It can be argued that the costs to universities of producing knowledge, providing editing services by academics, and allowing the use of campus physical and computer infrastructures constitute expenses that will remain whether scholarly reports are published in print or online journals. Nonetheless, e-journals do not incur printing and mailing costs and they allow public institutions such as universities to restrict costs to the creation of knowledge and to utilize open access e-journals as a lower-cost form of scholarly communication than print journals, a significant advantage in light of ongoing budgetary concerns of tertiary institutions world-wide.

The increased profile of e-journals is accompanied by several important issues that did not need to be addressed to the same degree in the traditional context of print journals. For instance, does global access to e-journals mean that information generated in one cultural context is being applied indiscriminately in other cultural arenas? If so, is that a form of cultural imperialism with all kinds of potential positive and negative results? Are researchers aware of the cultural specificity of their work and, therefore, the politics of information dissemination in other cultures? What literacy skills are needed to assess e-journals that may represent particular unexamined or at least insufficiently examined academic perspectives? Can the rapid speed of manuscript review and publication in e-journals promote academic fads rather than carefully considered patterns in scholarly communication? Obviously, these questions can be applied to print journals as well as e-journals and it is essential that both forms of publication be scrutinized carefully

so that members of the academy are aware of the potential drawbacks of irresponsible publication now and in the future.

E-Journals as a Form of Scholarly Communication

Like print journals, e-journals can play a significant and positive role in the dissemination of information if they adhere to the norms of academic discourse. That is, the articles that appear in e-journals should be premised on sound theory and research and, further, they should be articulated within clear conceptual frameworks (Fischer, 2004). Authors should demonstrate critical analyses of research findings that offer direction to other researchers, practitioners, and policy makers. Manuscripts should undergo rigorous blind peer review processes (Ziman, 2004) that are administered fairly and with scholarly integrity.

However, e-journals have changed the academic landscape to such a degree that additional issues ought to be addressed. For instance, e-journals are not universally accepted as a legitimate venue for academic discourse (Carley, 1999). Thus, academics ought to consider whether reservations about e-journals are valid and to what extent are they based on normal resistance to change. They should consider how their opinions about e-journals influence their ability to review fairly manuscripts submitted to e-journals or even their willingness to serve as reviewers for e-journals. Academics might even consider the degree to which the valuing of print journals over e-journals is a form of censorship. In addition, the proliferation of e-journals means that editors, reviewers, and readers ought to consider how manuscripts might move beyond their traditional text base to utilize communication tools such as sound, video, and animation. In other words, scholars should seek to expand their academic literacy skills in light of the new demands of e-journals.

Drawbacks of E-Journals Reconsidered

Drawbacks of e-journals that have been cited include unreliable archiving, a wide range of e-journal quality, the cost of computer equipment needed to access e-journals, a perceived higher likelihood of plagiarism, and acceptance of e-journals by universities. These concerns certainly have a basis in reality although closer examination may lead to the observation that they are not insurmountable (Ryan, 1994). To the contrary, some concerns about e-journals may, in fact, turn out to be significant strengths.

For instance, the long term archival of academic writing is extremely important in the context of scholarly discourse. Researchers draw on both major and relatively obscure works of the past to do their work in the present. However, researchers know that access to publications of the past is not always easy. Interruptions in library journal subscriptions leave serious gaps in specific library archives, less prominent journals may not be archived at all, deteriorating paper or bindings mean that some journal editions are out of circulation and unusable. Interlibrary loan services are able to locate specific documents some of the time but not always. Worse, print archives are vulnerable to damage due to environmental issues such as humidity and to disasters such as fire or flood. Therefore, a question worth investigating longitudinally is whether electronic archives are more or less susceptible to loss than print archives. It may be that electronic archives, perhaps in multiple sites, constitute a safer and cheaper way to archive academic writing. Indeed, it could be argued quite convincingly that access to existing e-journal archives is faster, cheaper, and more reliable than access to print archives. Nonetheless, the superiority of print journal archives over e-journal archives, or vice versa, is not clear and more time must pass before the archiving issue can be resolved. It may be that a blended form of archival will emerge as the most desirable form of preserving print journals and e-journals.

The wide range of e-journal quality is a reality (Miller & Talbot, 2004). E-journals are published by credible academic institutions such as universities and professional organizations but they also are published by entities that are less rigorous in journal focus and in the review process. The low cost of establishing an e-journal website, one of the major attractions for reputable e-journal publishers, also makes it possible for organizations or individuals with questionable motives to establish what may look at first glance to be credible e-journals. Readers need to understand how to examine e-journals to determine the level of trust that they ought to place in the online publications. That is, readers should look to see whether: (1) an e-journal is published by an academic institution or a well regarded professional organization, (2) the editor

is affiliated with a respectable organization, (3) there is an editorial board consisting of credible individuals who represent the readership the journal states it is serving, (4) a blind review process is utilized, and (5) there is bias evident in the e-journal's stated focus that could compromise scholarly ethics. Clearly, these criteria apply equally to a reader's assessment of print journals and it is equally clear that any discussion of e-journal quality notes the wide range of quality in print journals.

The issue of technological haves and have-nots has been raised as an obstacle to equitable access to online resources such as e-journals (Warschauer, 2002). Computer costs and Internet access certainly are major obstacles in developing nations and within certain demographic groups in developed countries. However, the rapid expansion in the use of wireless communication systems, lower cost computers, and mobile telephones with Internet access can be seen as countering forces to inequitable access to online resources. For example, the virtually ubiquitous use of mobile telephones in eastern Europe and Asia may mean that nations in these parts of the world will have much wider access to online resources than in the recent past. In any event, those who cannot afford computers and Internet service are also very likely to not be able to afford print journal subscriptions. Further, libraries in developing nations are unlikely to subscribe to many high cost print journals and, in fact, may be more likely to be able to offer at least some public access to computers and Internet service. (See Papin-Ramcharan & Dawe, 2006, for a discussion of research library costs in a developing country.)

Plagiarism in the context of electronic publication sometimes is a concern (Pitt & Levine, 1996). This concern arises from the ease with which information can be copied from a website, pasted into a document, and then submitted as a manuscript purportedly written by someone other than the original author. Descriptions of quick and easy plagiarism are accurate but they should be complemented with descriptions of how simple it is to observe plagiarism. Search engines such as Copernic (2004) make it far easier to determine plagiarism than in the past. Certainly, if information is published somewhere on the Internet, then it is almost certain to be locatable with a search engine. In fact, the searchability of the Internet (Hamilton, 2003) plus the global readership of articles published in e-journals make it possible for plagiarized work to be uncovered easier than ever before, perhaps even sooner than if the same plagiarized information appeared in a print journal (see McCullough & Holmberg, 2005).

As a former editor of an e-journal, I had authors ask me to provide information requested by members of university committees reviewing them for promotion and tenure. For instance, I have provided information about submission acceptance rates and the blind review process that was used. More interestingly, I have been asked for the number of subscriptions to the e-journal, a question which would make sense in the context of a print journal but which makes no sense in the context of an e-journal that is freely accessible online, a condition for inclusion in the *Communication of Research AERA SIG* (2004) list of e-journals. It was obvious to me that the universities' review procedures for tenure and promotion, or at least committee members' perceptions of the review procedures, were created during an era when print journals were the primary publication venue for refereed articles. However, it is not surprising that the only tenure or promotion-related question directed to me as editor or guest editor of long-established print journals came from authors who wanted to know if their manuscripts had been accepted so they might include them as in-press publications in their applications. It is possible that Cronin and Overfelt's (1995) conclusion, albeit qualified, that "the issue of publication medium may well be a non-issue as far as promotion and tenure decisions are concerned" (703), is an accurate portrayal of decisions made in university tenure and promotion committee meetings; however, the value of new media scholarship continues to be debated (Ball, 2004; Rowlands & Nicholas, 2005). E-journals have changed scholarly publication (Nowick & Jenda, 2004), very quickly and probably irrevocably, and institutional policies will need to be revised accordingly.

A Framework for Assessing E-Journals and Print Journals

E-journals are forcing a reconceptualization of academic publishing. Some of what we have understood about print journals is transferable to e-journals but other understandings may not survive the transfer. For instance, an article, that normally would be judged to be of low academic quality, published in a print publication that uses no review process, probably will have less of an impact (Quadrant 1 in Figure 1)

than if the same article were published online, given that it may be read by larger numbers of people world-wide (Quadrant 2).

Figure 1. Framework for Assessing E-Journals and Print Journals

Impact: Influence on researchers, practitioners, and policy makers	Quadrant 2 <ul style="list-style-type: none">• Low academic quality• High impact	Quadrant 4 <ul style="list-style-type: none">• High academic quality• High impact
	Quadrant 1 <ul style="list-style-type: none">• Low academic quality• Low impact	Quadrant 3 <ul style="list-style-type: none">• High academic quality• Low impact
Academic quality: theoretical and empirical base, appropriate design, critical analyses, peer review		

Similarly, articles that meet high standards of academic excellence and which are published online may fit within Quadrant 4. That is, they are the result of high quality scholarship and they have the potential to be read by more researchers, practitioners, and policy makers than if they were published in print journals with more limited readerships (Quadrant 3).

Therefore, e-journals have the potential to magnify the impact of manuscripts, thereby increasing the responsibility of authors, reviewers, and editors to publish work that demonstrates high academic quality. Similarly, readers need a heightened ability to discern between online publications that represent academic excellence and those of lesser quality. Authors and the wider academic community should be reminded that high impact is not necessarily a manifestation of academic excellence. Members of university tenure and promotion committees might consider how publication in a high quality e-journal may in fact increase the impact of a scholar's work and indeed be preferable to publication in a print journal of comparable quality. The work of librarians is critical in the context of e-journals because of their role in identifying high quality e-journals and maximizing access for researchers and students.

Conclusion

The rapid rise in the profile of e-journals underscores the urgent need for scholars to understand the strengths and limitations of online publication and to adjust their perceptions of print journals accordingly. In our efforts to understand the changing landscape for the dissemination of theory and research we ought not to become embroiled in an either-or debate about the relative merits of online and print publications. Rather, we should strive to maximize the impact of scholarship that meets high standards of academic excellence.

References

- Ball, C.E. (2004). Show, not tell: The value of new media scholarship, 21(4), 403-425.
- Bergstrom, T., and Preston McAfee, R. (2005). End free ride for costly journals. *Library Journal*, 130(20), 88.
- Carley, M.J. (1999). *Publish well and wisely: A brief guide for new scholars*. University of Akron Press. Retrieved February 20, 2006, from www3.uakron.edu/uapress/pubwell.html
- Communication of Research Special Interest Group, American Educational Research Association. (2004). Retrieved February 20, 2006, from <http://aera-cr.asu.edu/ejournals/index.html>
- Copernic Agent. (2004). Copernic Technologies, Inc. Retrieved February 20, 2006, from <http://www.copernic.com/en/products/agent/index.html>
- Cronin, B., and Overfelt, K. (1995). E-journals and tenure. *Journal of the American Society for Information Science*, 46(9), 700-703.
- Fischer, C.C. (2004). Managing your research writing for success: Passing the "Gate Keepers." *Business Quest: A Journal of Applied Topics in Business and Economics*. Retrieved February 20, 2006, from <http://www.westga.edu/~bquest/2004/gatekeepers.htm>
- Hamilton, D. (2003). Librarians help provide new solutions to an old problem. *Searcher*, 11(4), 26-28.
- McCullough, M., and Holmberg, M. (2005). Using the Google search engine to detect word-for-word plagiarism in master's theses: A preliminary study. *College Student Journal*, 39(3), 435-441.
- Meyer, R.W. (2001). A tool to assess journal price discrimination. *College & Research Libraries*, 62(3) 269-88.
- Miller, D. and Talbot, J. (2004, April 5). Report of the task force on electronic publications. University of California, San Diego. Retrieved February 20, 2006, from <http://academicaffairs.ucsd.edu/offices/apo/reports/EPTFReport.pdf>
- Morris, S. (2003). Open publishing: How publishers are reacting. *Information Services & Use*, 23, 99-101.
- Nowick, E., and Jenda, C.A. (2004). Libraries stuck in the middle: Reactive vs. proactive responses to the science journal crisis. *Issues in Science and Technology Librarianship*, 39. Retrieved February 20, 2006, from <http://www.istl.org/04-winter/article4.html>
- Pitt, D., and Levine, N. (1996). Electronic publishing and standards – Academic opportunity or opportunity? *Journal of Information, Law and Technology*. Retrieved February 20, 2006, from <http://elj.warwick.ac.uk/jilt/BILETA/1996/3pitt/default.htm>
- Quandt, R.E. (2003). Scholarly materials: Paper or digital? *Library Trends*, 51(3). Retrieved February 19, 2006, from http://www.findarticles.com/p/articles/mi_m1387/is_3_51/ai_102270882
- Papin-Ramcharan, J., & Dawe, R.A. (2006). Confronting the cost of information for a research library in the developing world—The University of the West Indies, Trinidad and Tobago's experience. *International Information & Library Review*, 38(1), 15-24.
- Rowlands, I., and Niicholas, D. (2005). Scholarly communication in the digital environment. *Aslib Proceedings*, 57(6) 481-497.
- Ryan, R. (1994). Electronic publishing takes off. *University of Tasmania Information Services Newsletter*, 86. Retrieved October 13, 2004, from http://info.utas.edu.au/docs/info/utas86/Electronic_Publishing.html
- Warschauer, M. (2002). Reconceptualizing the digital divide. *First Monday*, 7(7). Retrieved February 20, 2006, from http://www.firstmonday.dk/issues/issue7_7/warschauer/
- Ziman, J. (2004, July 20). Appendix 59: Memorandum from Professor Michael Ashburner, University of Cambridge. The United Kingdom Parliament Select Committee on Science and Technology. Retrieved February 20, 2006, from <http://www.publications.parliament.uk/pa/cm200304/cmselect/cmsctech/399/399we70.htm>

This article is a revised version of a paper presented to the *New Ways and New Technologies in Social Sciences, Humanities and the Arts Conference*, October 13-15, 2004, Calgary, Alberta, Canada.

Charles Webber is Professor and Associate Dean of the Graduate Division of Educational Research at the University of Calgary. Email: Charles.Webber@ucalgary.ca